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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,502	10/07/2003	Fabiano Rimediotti	71161	5507

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MCGLEW & TUTTLE, PC
P.O. BOX 9227
SCARBOROUGH STATION
SCARBOROUGH, NY 10510-9227

EXAMINER

BUEKER, RICHARD R

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/680,502

Applicant(s)

RIMEDIOTTI ET AL.

Examiner

Richard Bueker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schonherr (5,321,792) taken in view of Achtner (5,788,769), Kleyer I (5,179,622) and Portner (DE-970246) and taken in further view of Alexander (2,962,538). Schonherr discloses a vacuum evaporation apparatus for metallizing a strip substrate. It is noted that the Schonherr patent (see col. 1, lines 63-65) incorporates by reference the disclosure of U.S. patent 5,242,500 to Elvers, and therefore the entire disclosure of Elvers is included in the disclosure of Schonherr and is also relied on in this rejection. Elvers is the U.S. equivalent of DE-A-4027034 discussed on pages 2 and 3 of applicants' specification. Schonherr (Fig. 4) discloses the use of a plurality of resistively heated vaporization sources that are heated and fed with a metal wire, which is liquefied and vaporized, each source having a body extending in a main longitudinal direction. A strip substrate is fed over the sources in a feed direction. Schonherr does not discuss the use of sources that have plural pools of molten metal on the surface of each source. Each of the secondary references, however, teach that a resistively heated elongated source having plural pools of molten metal on the surface of the source will provide improved performance in comparison to a resistively heated source having one elongated pool. It would have been obvious to one skilled in the art to substitute a plural pool source of the type taught by the secondary references for each of the single

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pool sources used in the apparatus of Schonherr, because the secondary references teach that such a substitution would have provided improved vaporizer performance. Regarding claims 8-13, which are product-by-process claims, see MPEP 2113. The sources described in claims 8-13 appear to be identical with or only slightly different from that disclosed by Achtner, Kleyer I and DE-970246. It is noted that the "plurality of superficial incision lines" (claim 8, for example) reads on a conventional machining step to shape a ceramic or metal body, either prior to or after firing the body to sinter it. A "plurality of superficial incision lines" can be combined together to form a single large cavity.

Regarding the newly added claim 1 limitation of "each of said surface means provided for increasing the wettability of molten metal in a location", Alexander (5,321,792) has been added to this rejection. It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Achtner, DE-970246 or Kleyer I, because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface wettability of the boat cavity. The superficial incision lines recited in claim 27 represent a product-by-process limitation and they appear to be identical with or only slightly different from that disclosed by Alexander. It is noted that the "plurality of superficial incision lines" (claim 8, for example) reads on Alexander's disclosed step (col. 4, lines 10-12) of cutting grooves in a pre-sintered body of ceramic.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schonherr (5,321,792) taken in view of Achtner (5,788,769), Kleyer I (5,179,622),

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Portner (DE-970246) and Alexander (2,962,538) for the reasons stated in the preceding paragraph, and taken in further view of Anderson (3,770,529) (Fig. 2 and col. 3, line 61 to col. 4, line 10), Copley (4,914,270) (col. 1, lines 10-28), Fukushima (6,765,174) (Fig. 1, abstract and col. 9, lines 11-31) or applicants' description of the prior art (page 8, line 32 to page 9, line 10 of applicants' specification). It would have been prima facie obvious to form the cavities in the boats of Achtner, Portner or Kleyer I using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Also, it would have been prima facie obvious to form the superficial incision lines of Alexander using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Regarding applicants' description of the prior art, they state on page 9: "This type of incision machining is known per se to persons skilled in the art, but has not been used for the production of this type of sources (sic). The incision lines are typically formed by means of laser machining." It appears that applicants may be intending to say that laser machining was known in the prior art for forming an evaporation source, but has not been used to form "sources" (plural) as disclosed in their specification. Applicants should provide an unambiguous clarification of the meaning of this quoted statement.

Claims 17-20 and 23-27 are rejected under 35 U.S.C. 103(a) as obvious over Achtner (5,788,769) (Fig. 3) taken in view of Alexander (2,962,538). Regarding claims 23-27, which are product-by-process claims, see MPEP 2113. The boat described in

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claims 24-27 appears to be identical with or only slightly different from that disclosed by Achtner. Regarding the newly added claim 27 limitation of "each of said surface means provided for increasing the watability of molten metal in a location", Alexander (5,321,792) has been added to this rejection. It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Achtner because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface watability of the boat cavity.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achtner (5,788,769) taken in view of Alexander (2,962,538) for the reasons stated in the rejection of claim 17 above, and taken in further view of Portner (DE-970246) and/or Kleyer I (5,179,622). It would have been obvious to provide the pools of Achtner with a rectangular shape or flat bottom because Portner and/or Kleyer I teach that evaporation processes can be successfully performed using resistively heated evaporation boats having pool cavities of the claimed shapes.

Claims 17-27 are rejected under 35 U.S.C. 103(a) as obvious over Portner (DE-970246) (see figs. 1-7) or Kleyer I (5,179,622) (see Figs. 1 and 2) taken in view of Alexander (2,962,538). It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Portner or Kleyer I because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface watability of the boat cavity.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achtner (5,788,769), Portner (DE-970246) or Kleyer I (5,179,622), each one taken in view of

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Alexander (2,962,538), and taken in further view of Anderson (3,770,529) (Fig. 2 and col. 3, line 61 to col. 4, line 10), Copley (4,914,270) (col. 1, lines 10-28), Fukushima (6,765,174) (Fig. 1, abstract and col. 9, lines 11-31), or applicants' description of the prior art (page 8, line 32 to page 9, line 10). It would have been prima facie obvious to form the cavities in the boats of Achtner, Portner or Kleyer I using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Also, it would have been prima facie obvious to form the superficial incision lines of Alexander using a laser, because Anderson, Copley, Fukushima and applicants' description of the prior art each teaches that a laser can be used for laser machining a ceramic body into a desired shape. Regarding applicants' description of the prior art, they state on page 9: "This type of incision machining is known per se to persons skilled in the art, but has not been used for the production of this type of sources (sic). The incision lines are typically formed by means of laser machining." It appears that applicants may be intending to say that laser machining was known in the prior art for forming an evaporation source, but has not been used to form "sources" (plural) as disclosed in their specification. Applicants should provide an unambiguous clarification of the meaning of this quoted statement.

Claims 28-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleyer II (5,198,032) in view of Yamaji (JP 1-219157) or Schonherr (5,321,792) and in further view of Achtner (5,788,769), Kleyer I (5,179,622) and Portner (DE-970246) and taken in further view of Alexander (2,962,538). Kleyer II (Fig. 1) discloses a vacuum

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vaporization plant in which a web-like substrate is passed over at least one crucible, said crucible having a main longitudinal direction. The "feeding direction" of the web-like substrate is along the surface of rotating coating roller 18. It can be seen from Fig. 1 of Kleyer II that this feeding direction includes a direction of feeding that is inclined with respect to the main longitudinal direction of the crucible. Yamaji (Fig. 1) and Schonherr are cited to show that it was known in the art to provide plural aligned crucibles to coat a moving web substrate. It would have been obvious to one skilled in the art to use plural crucibles in the apparatus of Kleyer II because Yamaji and Schonherr teach that a moving web can be coated desirably more uniformly using plural crucibles.

Kleyer II does not discuss the use of sources that have plural pools of molten metal on the surface of each source. Each of Achtner, Kleyer I and Portner, however, teach that a resistively heated elongated source having plural pools of molten metal on the surface of the source will provide improved performance in comparison to a resistively heated source having one elongated pool. It would have been obvious to one skilled in the art to substitute a plural pool source of the type taught by the secondary references for each of the single pool sources used in the apparatus of Kleyer II, Yamaji or Schonherr, because Achtner, Kleyer I and Portner teach that such a substitution would have provided improved vaporizer performance. Regarding claims 32-35, which are product-by-process claims, see MPEP 2113. The sources described in claims 8-13 appear to be identical with or only slightly different from that disclosed by Achtner, Kleyer I and Portner. It is noted that the "plurality of superficial incision lines"

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(claim 8, for example) reads on a conventional machining step to shape a ceramic or metal body, either prior to or after firing the body to sinter it. A "plurality of superficial incision lines" can be combined together to form a single large cavity.

Regarding the newly added claim 28 limitation of "each of said surface means provided for increasing the wetability of molten metal in a location", Alexander (5,321,792) has been added to this rejection. It would have been obvious to one skilled in the art to provide superficially processed lines in the pool cavities of Achtner, DE-970246 or Kleyer I, because Alexander teaches that superficially processed lines in a boat cavity will desirably improve the surface wetability of the boat cavity.

Applicants have argued that Portner (DE 970246) and Achtner have discontinuities such as holes to increase resistivities of the boat. Applicants further argue that in their invention, there are no such discontinuities. It is noted, however, that the "comprising" language of the present claims (see applicants' claim 1, line 2, for example) does not exclude the presence of holes for increasing the resistivity of the claimed body. Also, the newly added limitation of "a continuous conductive cross section means" does not exclude the presence of holes as in Portner or Achtner. The cross section of the body of Portner (and of Achtner) is "continuous" and it is "conductive", and therefore it is "a continuous conductive cross section means".

Applicants have provided a list of disadvantages of using discontinuities as in Portner or Achtner. It is noted again, however, that applicants' claims do not exclude the presence of discontinuities.

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Applicants have again argued that Kleyer connects two vaporization boats together, and that Kleyer fails to disclose a single source with separate pools of molten metal. It is noted, however, that the evaporators of Kleyer are clamped together to form a single body, and Kleyer's evaporation source therefore comprises "a body extending along a main longitudinal direction and including a first surface means and a second surface means" as recited in claim 1, for example.


Applicants have also argued that Aichtner's pools are not physically separated. It is noted, however, that Fig. 3 of Aichtner clearly illustrates the pools as being physically separated.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (571) 272-1431. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parvis Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Richard Bueker
Primary Examiner
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